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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/790,844      | 03/03/2004  | Mathias Rollwage     | R.304240            | 2494             |

7590 08/29/2006  
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EXAMINER

SHAH, SAMIR M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2856

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                        |  |
|------------------------------|--------------------------------------|----------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/790,844 | <b>Applicant(s)</b><br>ROLLWAGE ET AL. |  |
|                              | <b>Examiner</b><br>Samir M. Shah     | <b>Art Unit</b><br>2856                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                            | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 07/06/2006 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 2, 5-7, 9-11, 14-16 and 18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Drawings***

3. The drawings, especially Figures 1 and 2, are objected to because it is confusing as to which particular structural element is referred to by reference number (6). It is suggested that either the arrow pointing from (6) be made to touch the fluid feeding device, in figures 1 and 2, or the fluid feeding device (6) be shown separately outside of the tank (1) in a separate drawing.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-5, 7-14 and 16-20 rejected under 35 U.S.C. 102(e) as being anticipated by Sawert et al. (US Patent 6,951,131 B2 henceforth "Sawert") based on the filing date, 09/06/2002, of the Provisional application No. 60/408,626.

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(a) As to claims 1 and 10, Sawert discloses a “fuel level indication assembly” (10) for measuring the level of a fluid in a container/fuel tank (12) of a motor vehicle, the container/fuel tank (12) including a sound guide conduit/guide housing (26) disposed in the container/fuel tank (12), a fluid feeding device/fuel delivery module (14) in the container/fuel tank (12), and at least one ultrasonic transducer (36, 38) disposed near one end of the sound guide conduit/guide housing (26) for generating ultrasonic pulses and for receiving the ultrasonic pulses reflected in the region of the surface of the fluid in the container/fuel tank (12), the improvement wherein the sound guide conduit/guide housing (26) and the ultrasonic transducer (36, 38) are disposed in the container/fuel tank (12) on an outer circumference of the fluid feeding device/fuel delivery module (14) (figure 1; abstract; column 3, lines 1-48).

(b) As to claims 2 and 11, Sawert discloses the sound guide conduit/guide housing (26) and/or the ultrasonic transducer (36, 38) being cast, glued, welded, clipped or screwed onto the outer circumference of the fluid feeding device/fuel delivery module (14) (figures 1, 4).

(c) As to claims 3, 4, 12 and 13, Sawert discloses a “fuel level indication assembly”, as applied to claim 1 above, wherein the sound guide conduit/guide housing (26) comprises a horizontal or oblique forward-flow region disposed near the container/fuel tank (12) bottom, and wherein the forward-flow region is straight or looped (figure 4; column 5, lines 29-59).

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(d) As to claims 5 and 14, Sawert discloses the sound guide conduit/guide housing (26) comprising at least one bend with one deflection each and/or at least one straight region with a conduit slope angle (figure 4).

(e) As to claims 7 and 16, Sawert discloses the sound guide conduit/guide housing (26) having at least two openings/plurality of apertures (30) communicating with the interior of the container (12) (figure 1; column 3, lines 20-32).

(f) As to claims 8 and 17, Sawert discloses a "fuel level indication assembly", as applied to claim 1 above, wherein the sound guide conduit/guide housing (26) comprises a flexible portion (figures 1, 4).

(g) As to claims 9 and 18, Sawert discloses each one of the ultrasonic transducer (36, 38) being simultaneously a transmitter and a receiver (column 3, lines 49-67; column 4, lines 16-27, 65-67; column 5, line 1).

(h) As to claims 19 and 20, Sawert discloses the fluid feeding device/fuel delivery module (14) including a fuel pumping device/electrical fuel pump (24) (figure 1; column 3, lines 7-19).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawert as applied to claims 1 and 10 above, and further in view of Cummings (US Patent 5,471,872 henceforth "Cummings").

As to claims 5 and 14, Sawert does not expressly disclose that the sound guide conduit/guide housing (26) includes at least one bend with one deflection each and/or at least one straight region with a conduit slope angle.

Cummings teaches in a patent entitled "Acoustic liquid level measuring apparatus" a sound guide conduit/acoustic wave guides (20, 22), which include at least one bend with one deflection each and/or at least one straight region with a conduit slope angle (figure 1; column 2, lines 35-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sawert's liquid level sensing apparatus to include a sound guide conduit/guide housing (26) with at least one bend with one deflection each and/or at least one straight region with a conduit slope angle because by adding this feature the apparatus would be able to give a direct measurement of the liquid level.

9. Claims 6, 9, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawert as applied to claims 1 and 10 above, and further in view of Shuler et al. (US Patent 4,090,407 henceforth "Shuler").

(a) As to claims 6 and 15, Sawert fails to disclose a sound guide conduit/guide housing (26) with at least one reference reflection surface.

Shuler teaches in a patent entitled "Water level measurement device" a sound guide conduit/tube (1), which comprises at least one reference reflection surface/insert (3) (figure 3; column 2, lines 49-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sawert's liquid level sensing apparatus to include a sound guide conduit/guide housing (26), which comprises at least one reference reflection surface because by adding this feature the apparatus would be able to give a standard measurement of liquid level within the fuel tank/container (12).

(b) As to claims 9 and 18, Sawert does not expressly disclose an ultrasonic transducer/transmitter transducer (36, 38) that is simultaneously a transmitter and a receiver.

Shuler teaches that it is known to use an ultrasonic transducer (2) that is simultaneously a transmitter and a receiver (claim 10; column 2, lines 41-47).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sawert's liquid level sensing apparatus to include an ultrasonic transducer that is simultaneously a transmitter and a receiver because by adding this feature the apparatus would be more compact with fewer components.



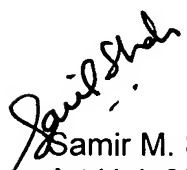
**Conclusion**


10. The prior art made of record and not relied upon, cited in the attached 892 form, is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir M. Shah whose telephone number is (571) 272-2671. The examiner can normally be reached on Monday-Friday 9:30 am to 6:00 pm.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
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Art Unit 2856  
8/21/2006

  
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